# GENERAL STRUCTURAL NOTES

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#### **GOVERNING CODES:**

1) INTERNATIONAL BUILDING CODE (IBC), 2012 EDITION
2) BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 318-08

## DESIGN LOADS AND CRITERIA:

WIND CRITERIA:

OCCUPANCY CATEGORY IV; IMPORTANCE FACTOR: I= 1.15

BASIC WIND SPEED 85 MPH: EXPOSURE C

SEISMIC CRITERIA:

OCCUPANCY CATEGORY IV; IMPORTANCE FACTOR: I= 1.5 SITE CLASS D; SDS = 0.527 / SD1 = 0.378; DESIGN CATEGORY D

SOIL BEARING PRESSURE:

1500 PSF

### MATERIALS:

#### CONCRETE:

PORTLAND CEMENT ASTM C150 TYPE I / II
FLY ASH ASTM C615 CLASS C OR F 30% MAX. BY WEIGHT
WATER / CEMENT + FLY ASH = 0.45 MAXIMUM
ENTRAINED AIR 4.5% - 7.0%

3/4" MAX. NORMAL WEIGHT AGGREGATE
f'c = 4000 PSI - EXTERIOR FOOTINGS & SITE WORK

## MILD REINFORCING:

REINFORCING BARS:

ASTM A615, GRADE 60

ASTM A706, GRADE 60 FOR WELDING

#### FOUNDATIONS:

## FOOTINGS:

PLACE FOOTINGS ON ENGINEERED FILL PLACED OVER UNDISTURBED NATURAL INORGANIC SOILS.
ENGINEERED FILL MATERIAL SHALL BE MINUS 3/4" GRANULAR MATERIAL. PLACE ENGINEERED FILL IN UNIFORM LIFTS AND COMPACT TO 98% STANDARD PROCTOR ACCORDING TO ASTM D698. PLAN LIMITS OF ENGINEERED FILL MUST EXTEND AT LEAST 1'-0" BEYOND ALL FOOTING EDGES AT BEARING ELEVATION, PLACED AT 1.5 HORIZONTAL TO 1 VERTICAL OR FLATTER.

## CAST-IN-PLACE CONCRETE:

PERFORM CONCRETE WORK IN ACCORDANCE WITH ACI 301-08 STANDARD "SPECIFICATIONS FOR STRUCTURAL CONCRETE" UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.

## MINIMUM MILD REINFORCING BAR COVER:

3" AT UNFORMED SURFACES EXPOSED TO EARTH.
2" AT FORMED SURFACES EXPOSED TO EARTH OR WEATHER

SPLICE REINFORCING BARS BY LAPPING ACCORDING TO THE SCHEDULE ON THE DRAWINGS. ADD #5x4'-0" DIAGONAL EACH FACE AT ALL OPENING CORNERS AND #5x4'-0" DIAGONAL MID-DEPTH AT ALL RE-ENTRANT SLAB CORNERS UNLESS SHOWN OTHERWISE. SECURE ALL REINFORCING IN POSITION WITH CHAIRS BEFORE CONCRETE PLACEMENT. CONCRETE DOBIES MAY BE USED TO POSITION SLAB ON GRADE REINFORCEMENT. TIE DOWELS IN PLACE BEFORE PLACING CONCRETE. DO NOT STAB OR "WET-SET" DOWELS. INSTALL AND SECURE EMBEDMENTS SUCH AS ANCHOR BOLTS AND EMBEDMENT PLATES WITHIN SPECIFIED TOLERANCES BEFORE CONCRETE PLACEMENT.

MECHANICALLY VIBRATE ALL CONCRETE PLACEMENTS EXCEPT SLABS LESS THAN 5" THICK. PROTECT AND CURE ALL CONCRETE SURFACES. BEGIN CURING WALLS IMMEDIATELY AFTER STRIPPING FORMS AND FLATWORK IMMEDIATELY AFTER FINISHING.

## **SPECIAL INSPECTIONS:**

SPECIAL INSPECTIONS DESCRIBED BELOW SHALL BE PERFORMED BY TESTING AGENCY RETAINED BY CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE ENGINEER APPRISED OF WORK PROGRESS AS IT PERTAINS TO SPECIAL INSPECTIONS AND ENSURING THAT NO WORK REQUIRING SPECIAL INSPECTIONS IS CONCEALED BEFORE SPECIAL INSPECTIONS OCCUR. SEE PROJECT SPECIFICATIONS FOR OTHER INSPECTIONS AND MATERIALS TESTING REQUIREMENTS. ALL SPECIAL INSPECTIONS SHALL MEET THE REQUIREMENTS OF IBC CHAPTER 17 AS FOLLOWS:

# CONCRETE CONSTRUCTION: REF. IBC 1704.4

REINFORCING STEEL:

INSPECT BEFORE CONCRETE OR GROUT PLACEMENT.

REINFORCED CONCRETE:

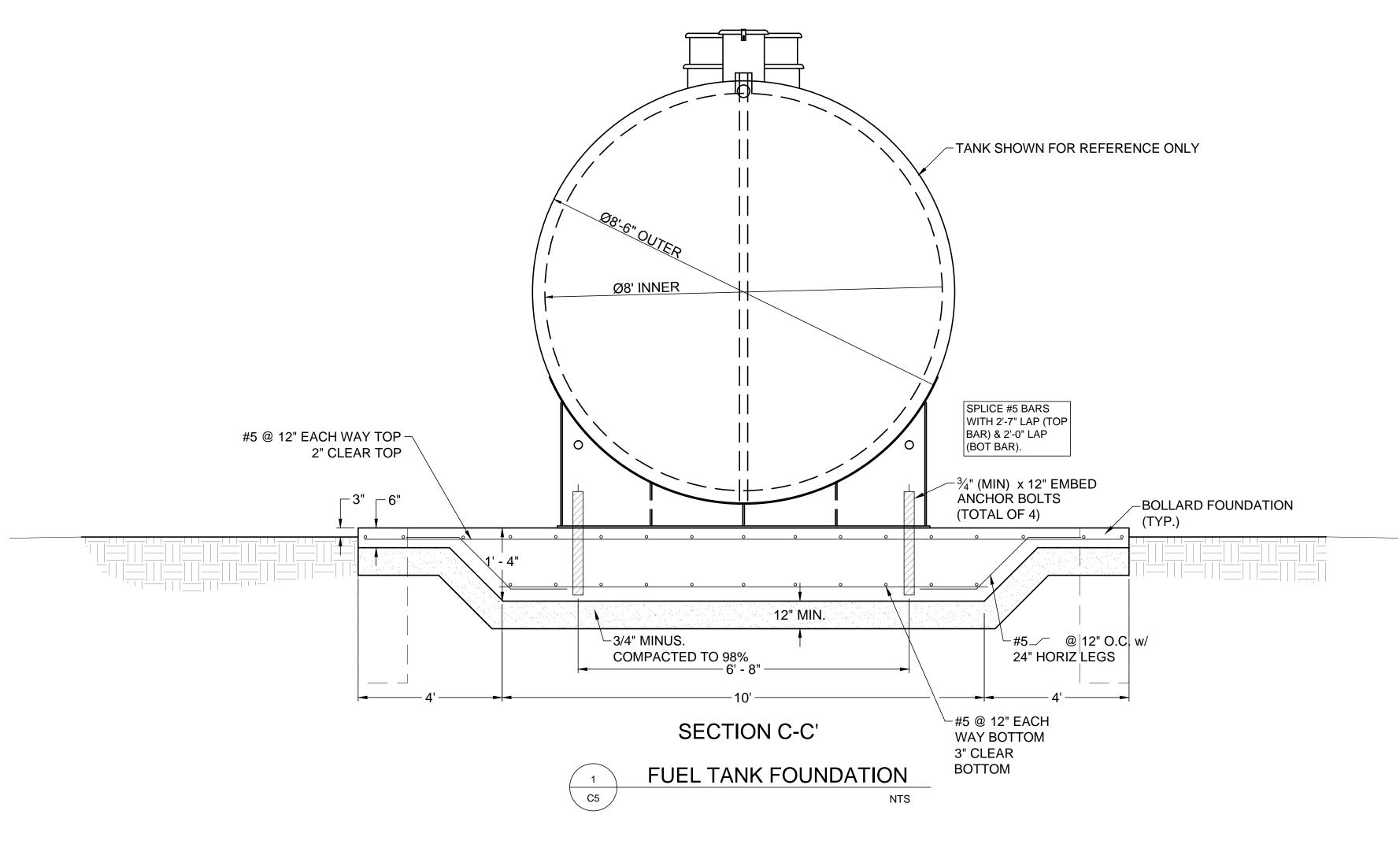
CONTINUOUS INSPECTION DURING CONCRETE PLACEMENT. (INCLUDES VERIFICATION OF PROPER MIX DESIGN AND CURING METHODS)

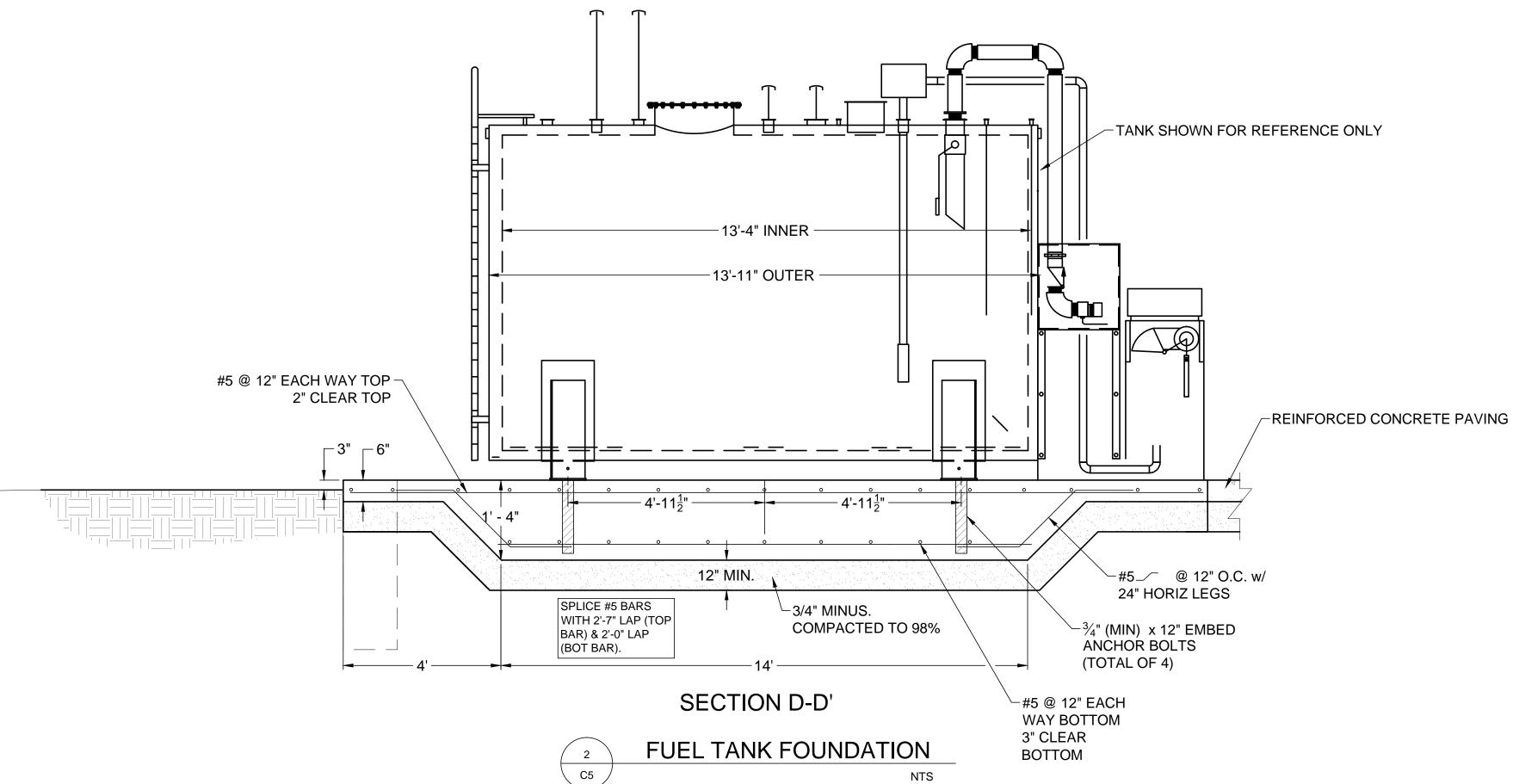
ANCHOR BOLTS:

INSPECT ALL BEFORE CONCRETE PLACEMENT.

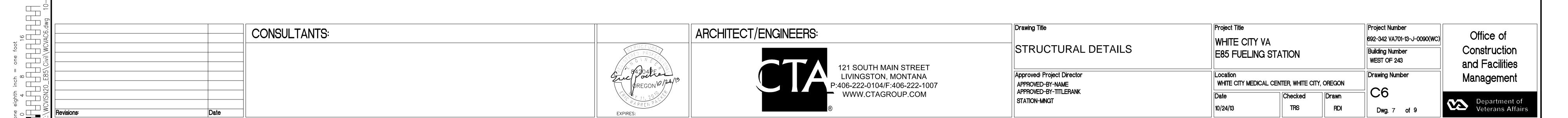
ADHESIVE ANCHORS:

PERIODIC INSPECTION DURING OR AFTER INSTALLATION.





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